



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

JUN 3 0 2003

Mr. Dave Slone
V.P. Technical Operations
Blue Rhino Corporation
104 Cambridge Plaza Dr.
Winston-Salem, NC 27104

Ref. No. 02-0160

Dear Mr. Slone:

This is in response to your letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they pertain to the requalification of DOT specification cylinders. Specifically, you ask if the requirement to increase the test pressure by 10% or 100 psi, following an system apparatus failure applies to the following examples.

I apologize for the delay in responding and hope it has not caused any inconvenience. Your scenarios and questions are presented and answered in numerical sequence.

Scenario 1:

The retest pressure of a DOT specification 4BA240 cylinder undergoing a water jacket hydrostatic test is 480 psi, the minimum prescribed test pressure of the cylinder. The test operator attempts a system check prior to performing the test at 90% of test pressure and the system malfunctions.

- Q1. After correcting the test system problems, at what corrected or increased pressure should the retest be performed - $432 \text{ psi} + 10\% = 475.2 \text{ psi}$ or $480 \text{ psi} + 10\% = 528 \text{ psi}$?
- A1. In a final rule published in the Federal Register on August 8, 2002 [67 FR 51626; HM 220D] and corrections to the final rule [67 FR 61287; 9/30/02], the provisions in § 173.34(c)(4)(v) were re-designated to § 180.205(g). As specified in § 180.205(g), a second retest is authorized at a pressure increased by 10% or 100 psi, whichever is less when the system apparatus fails to hold pressure after test pressure has been reached. Accordingly, in your first scenario the system apparatus malfunctions during a system check at 90% of test pressure and not at the minimum specified test pressure of 480 psi. Therefore, the provisions in § 180.205(g) do not apply to the first scenario and the test must be performed at the minimum test pressure of 480 psi, 2 times the service pressure as specified in § 180.209(a)(1), Table 1.



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173.34(e)(4)(v)

Scenario 2:

Continuing with the above scenario, the test system has been repaired and an attempt is made to test the cylinder at the corrected/increased retest pressure. The test system fails a second time at or below the corrected retest pressure.

- Q2 (a) May the test be repeated a 3rd time? If so, what pressure should the cylinders be retested?
- (b) How many times may the retest pressure be continually increased due to testing system failures?
- (c) Is there ever a case where this test may be performed at pressures above 528 psi?
- A2 (a) As stated in response A1, if the test is conducted at a pressure above 90% of test pressure and the system fails, only one second retest may be repeated at a pressure increased by 10% or 100 psig, whichever is less.
- (b) The HMR permits only one repeat test in the case of malfunctioning test equipment.
- (c) See response A2(b). The HMR authorizes only one repeat test.

I hope this answers your inquiry. If you need additional assistance, do not hesitate to contact this office.

Sincerely,



Delmer F. Billings
Chief, Standards Development
Office of Hazardous Materials Standards

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**Blue Rhino
Corporation**

Fax

Webb
§173.34(e)(4)(v)
Cylinders
02-0160

To: Mr. Edward T. Mazzullo, Director,
Office of Hazardous Materials Standards
Research & Special Programs Administration
U.S. Department of Transportation

From: Dave Slone,
VP, Technical Operations

Fax: 202 366-3012

Pages: 2

Phone:

Date: 6/4/2002

Re: Request for Formal Interpretation

CC: Bill Womble, Jr. (fax) 336 733-8318

Dear Mr. Mazzullo,

Blue Rhino Corporation requests a formal interpretation of Title 49, CFR, Part 173, Section 173.34, paragraph (e) (4)(v) (page #430 of the 10-1-01 edition) pertaining to test pressures required for retesting DOT 4BA-240 cylinders previously used in LP-Gas service. This interpretation is necessary to remove confusion that exists within the LP-Gas industry related to what pressure should be used for water jacket hydrostatic pressure retests in the event of test system failures.

Rationale: The current wording of this paragraph is ambiguous. It states that when a testing system check is being performed at or below 90% of the specified test pressure and a system malfunction occurs, "the test may be repeated at a pressure increased by 10 percent or 100 psig, whichever is less", yet it does not stipulate to what reference pressure the increase of 10 percent in pressure is related - the testing system check pressure or the minimum specified retest pressure listed in the Retest And Inspection Of Cylinders table provided in this same paragraph.]

The following scenarios and questions are submitted to show the existing ambiguity and our reasons for requesting clarification and interpretation:

Example Scenario #1 - The retest pressure of a 4BA-240 cylinder undergoing a water jacket hydrostatic test is 480 psi (2 times working pressure of 240psi). The operator attempts a system check at 90% (432 psi) and the system malfunctions.

Question #1 - After correcting testing system problems, what corrected/increased pressure should now be used for the retest - 432psi + 10% = 475.2psi or 480psi + 10% = 528psi?

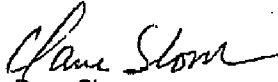
Example Scenario #2 - Continuing on with the above example, the testing system has been repaired and an attempt is made to test the cylinder at the corrected/increased retest pressure. The testing system fails a second time at or below the corrected/increased retest pressure.

Questions #3, #4, #5 and #6 May the test be repeated a 3rd time? If so, what should the new corrected/increased retest pressure? How many times may the retest pressure be continually increased due to testing system failures? Is there ever a case where this test may be performed at pressures above 528psi?

June 4, 2002

Please contact me at (336) 659-8958 for any questions or if any additional information is needed.

Sincerely,



Dave Stone

VP, Technical Operations

Blue Rhino Corporation